

Extended Abstract

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Research paper

The Effectiveness of the Combined Treatment of Self-Compassion and Lifestyle Modification on the Psychological Distress of Obese Women

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Introduction

Today, the epidemic of non-communicable diseases, such as the prevalence of dietary and lifestyle diseases, is increasing. The increase in obesity rate shows a worrying trend among women in developing countries with low and middle income. This is attributed to population shifts in these countries and lifestyle changes worldwide ([Hiremath, Kumar, Huchchannavar & Ghodke, 2023](#)). World Health Organization statistics show that in 2016, approximately 1.3 billion people had a BMI ≥ 25 kg. Also, the statistics of this organization indicated that Iran has 61.6 percent of people with overweight and 25.8 percent of people with obesity among the seven countries of the Middle East ([World Health Organisation, 2021](#)). The importance of studying obesity lies in the fact that, despite scientific advances, it continues to spread, particularly among women, and remains one of the most significant problems of the current century. The World Health Organization defines obesity as a complex and multifactorial disease (physical, psychological, cultural and environmental). The study of psychological factors affecting obesity is crucial. According to the studies, psychological distress can explain part of the variance in obesity ([Serpell et al., 2020.](#), [Hagan et al., 2020](#)). Evidence shows that psychological distress, if activated, can lead to psychological disorders such as anxiety, depression, and eating disorders ([Kadriu et al., 2023](#), [Hagan et al., 2020](#)). Therefore, lifestyle interventions and teaching emotion regulation strategies based on self-compassion as a treatment focused on ego improvement can increase people's ability to control weight by modifying eating, sleeping and stress management patterns ([Stindel et al., 2017](#)). Therefore, the aim of the present study is to test the effectiveness of the combined treatment of self-compassion and lifestyle modification on the psychological distress of obese women.

Method

The current research was a semi-experimental study conducted using a pre-test-post-test-follow-up design over two months, with both experimental and control groups. The statistical population included all women with BMI ≥ 25 who referred to dietary treatment centers in Qazvin city in the winter of 1401. The research sample was 60 women with BMI ≥ 25 who were selected voluntarily. The sample size was equal to 60 people (30 people for each group) by considering the alpha of 0.05 and the acceptable level of power of the test equal to 0.80 and the effect size of 0.50 using the G.POWER program. The 60 participants were randomly assigned to two groups of 30. The intervention group was trained in 12 2-hour sessions 3 times a week (for 4 weeks) using the therapeutic protocol of self-compassion and lifestyle, and the control group was placed on the waiting list for treatment and did not receive any treatment. The data collection tools were as follows: Body Mass Index (BMI) and Depression-Anxiety-Stress Questionnaire (DASS-21, [Lavibond and Lavibond \(1995\)](#)). The intervention group received 12 sessions of training based on the self-compassion treatment

protocol (Gilbert, 2009) and lifestyle modification (Barlow, 2001); and the control group was placed on the waiting list for self-compassion and lifestyle therapy and did not receive any treatment. Subjects in both experimental and control groups participated in the pre-test, post-test, and follow-up and answered the questionnaires individually without a time criterion. Finally, data analysis was performed using SPSS software and the Multivariate Analysis of Covariance method.

Results

In the current study, 60 women with BMI ≥ 25 , aged 25-40, were randomly assigned to the experimental group (30 participants) and the control group (30 participants). The mean (and standard deviation) age in the experimental group was 29.20 (4.66), and in the control group, it was 31.20 (3.94). Analysis of variance with repeated measurements has been used to test the research hypotheses. The assumptions of Lunn's test (homogeneity of variance of errors) and Machelli's test (homogeneity of variances in designs with repeated measurements) were valid for the stress variable ($P < 0.05$), the Greenhouse-Geisser conservative test is used for this variable. The findings related to multivariate indicators showed that the observed F of the test of Lambda-Wickles ($F = 9.07$, $\text{Eta}^2 = 0.65$) is significant ($P < 0.05$), which indicates the existence of a significant difference in at least one of the compared variables (stress and depression). These findings indicate that the interaction of group and time is significant and the effect of the intervention on the dependent variables was different depending on the separation of groups and different time stages, and the findings are reported in more detail using Benferroni's follow-up test. The results show that the post-test and follow-up scores of stress eating and depression in the experimental group decreased significantly compared to the pre-test scores ($P < 0.001$); Therefore, the treatment of self-compassion and lifestyle has been effective on the dependent variables and the hypotheses of the research are confirmed.

Table 1: The results of the Analysis of Variance Test to compare the mean of stress and depression

Variable	Sources	F	P	η^2	Op
Stress	Time Effect	12.67	<0.001	0.17	0.99
	Group Effect	9.25	<0.001	0.13	0.84
	Time*Group	14.73	<0.001	0.20	0.99
Depression	Time Effect	38.80	<0.001	0.40	1
	Group Effect	7.43	<0.001	0.11	0.76
	Time*Group	28.26	<0.001	0.32	1

Discussion and Conclusion

The results obtained from this research showed that the combined treatment of self-compassion and lifestyle modification is effective in reducing mental distress (stress). This finding can be explained by the biological and cognitive components of stress in relation to obesity. When faced with stressful events such as failure, the hypothalamus-pituitary-adrenal circuit is activated and by releasing cortisol, it weakens the self-regulation strategies of food control (Taylor, 2020; Conklin et al., 2019). Another finding of the current research showed that the combined treatment of self-compassion and lifestyle is effective in reducing mental distress (depression). In explaining this finding, it can be said that depression with the participation of genetic, epigenetic and environmental factors can appear in different forms and affect appetite and sleep performance (Fulton et al., 2021). It is concluded that self-compassion therapy emphasizes regulating emotion, establishing a compassionate relationship with oneself, working on implicit memory to face suffering when things go wrong, such as failure in treatment. On the other hand, lifestyle modification seeks to manage stress, strengthen interpersonal relationships and support, and control diet, which can lead to the reduction of mental problems in line with self-compassion treatment with common origins. Cognitive and lifestyle modification of overweight women. The research sample of women and non-random sampling and lack of attention to the economic and cultural role can be seen as limitations of the current research. In this way, it is suggested to remove the mentioned limitations in future studies. The results of this study can be used in obesity treatment centers along with other treatments to improve obesity and increase awareness in eating behavior.

Ethical Considerations

Ethical Code

This article is taken from the doctoral dissertation of general psychology and has been approved by the ethics committee of the Raset Branch Islamic Azad University with the code IR.IAU.RASHT.REC.1399.085.

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Authors' Contributions

Gita Alipour conducted the research, implementation of training, statistical analysis, and wrote the manuscript as part of her MA thesis at the University of Gilan. Bahman Akbari supervised the research process, methodology and, revise it critically for intellectual content, and approved the final version for publication.

Conflicts of Interest

This study is based on a doctoral thesis, supported by the Raset Branch Islamic Azad University and no potential conflict of interest was reported by the authors.

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